

WHAT IS CLAIMED IS:

1. A method of laser beam machining, characterized in
that a plurality of laser diode arrays are disposed in such a manner
as to allow radiation of laser beams in a direction of a width of a part to
be processed, and
that each of the laser diode arrays is controlled in accordance with
the direction of the width of the part to be processed so as to shape laser
beams and irradiate the part to be processed with the laser beams.
2. The method of laser beam machining according to claim 1, characterized
in
that each of the laser diode arrays is controlled and laser beams are
shaped such that distribution of energy is changed in accordance with a
width position of the part to be processed.
3. The method of laser beam machining according to claim 2, characterized
in
that the distribution of energy is changed by controlling each of the
laser diode arrays and shaping the laser beams such that laser beams
with which the part to be processed is irradiated in its widthwise
marginal portions exhibit a higher intensity than laser beams with which
the part to be processed is irradiated in its widthwise central portion.
4. The method of laser beam machining according to any one of claims 1 to 3,
characterized in
that laser beam machining is a processing which is selected from
padding, welding and hardening and to which the part to be processed is
subjected.